

ABSTRACT OF THE DISCLOSURE

In an outer tube, which is made of silicon carbide, and which has an upper portion closed and a lower portion opened, has the lower portion formed with a tapered
5 portion so as to expand a diameter thereof toward a lower end thereof, and has a flange formed on an outer peripheral side of the lower portion; the following conditions are met:

- 1) a ratio of t_a/D_1 is from 0.0067 to 0.025,
- 10 2) a product of $t_a \times D_1$ is from 600 to 4,000 (mm^2),
- 3) $(D_{F2}-D_{F1}) \times t_c / (D_1 \times t_a)$ is from 0.1 to 0.7, and
- 4) L_1/L_2 is from 1 to 10;

where the outer tube has a thickness of t_a (mm) and an inner diameter of D_1 (mm), the flange has a thickness
15 of t_c (mm), an inner diameter of D_{F1} (mm) and an outer diameter of D_{F2} (mm), and the tapered portion has a height L_1 (mm) and an expanse of L_2 (mm).